DOCUMENT RESUME

ED 399 384 CE 072 449

AUTHOR Benn, Roseanne; And Others
TITLE Adult Education at the Margins and towards New Paradigms. Occasional Paper Number 2.
INSTITUTION Exeter Univ. (England). Centre for Research in Continuing Education.
REPORT NO ISBN-1-899070-02-8
PUB DATE 96
NOTE 59p.
PUB TYPE Collected Works - General (020) -- Information Analyses (070)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Adult Education; *Age Discrimination; Attitude Change; Citizenship; *Educational Change; Educational Needs; Educational Policy; Educational Practices; Educational Principles; *Educational Research; Foreign Countries; *Mathematics Instruction; Models; *Multicultural Education; Nursing Education; Research Methodology; Theory Practice Relationship
IDENTIFIERS United Kingdom

ABSTRACT

This document contains four papers that examine four diverse topics from the field of adult education: multiculturalism, ageism, mathematics, and new paradigm research. In "Editorial Introduction," Roger Fieldhouse gives an overview of the papers and the experience of their authors. The first paper, "Multi-Cultural Perspectives on Adult Education: Putting Policy into Practice" (Nancy Gidley), discusses the need for multicultural education and issues of curriculum, access, staff development, resources, and management. The role of nurse education in challenging ageist attitudes among student nurses in the delivery of health care to older adults is examined in Catherine Cadman's paper "Ageist Practice in Nursing: The Challenge to Professional Education." In her paper "Transposing Mathematics from the Margins to the Centre," Roseanne Benn discusses the links between democracy, adult education, and mathematics. Allen Parrott's paper "Adult Education and New Paradigm Research" describes new paradigm research and suggests that adult education would be an especially fertile ground for new-style inquiry methods and philosophy because of their accord with adult education values. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 399 384

UNIVERSITY of EXETER

Centre For Research In Continuing Education

Occasional Paper Number 2

Adult Education at the Margins

and

Towards New Paradigms

Roseanne Benn
Catherine Cadman
Nancy Gidley
Allen Parrott

Edited by
Roger Fieldhouse

1996

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
R Fieldhouse
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

BEST COPY AVAILABLE

CE 072 449

ADULT EDUCATION AT THE MARGINS AND TOWARDS NEW PARADIGMS

Roseanne Benn
Catherine Cadman
Nancy Gidley
Allen Parrott

Editor

Roger Fieldhouse

Centre for Research in Continuing Education
University of Exeter
1996

Adult Education at the Margins and Towards New Paradigms
University of Exeter Centre For Research in Continuing Education (1996).
ISBN: 1-899070-02-8
Copyright University of Exeter Centre for Research in Continuing Education.
Not to be reproduced in any form without the written permission of the authors and editor.

THE UNIVERSITY OF EXETER CENTRE FOR RESEARCH IN CONTINUING EDUCATION
Director: Roger Fieldhouse.
Cotley, Streatham Rise, Exeter EX4 4PE.
Tel. 01392-411905. Fax. 01392-436082

The aims of the Centre are to:

- encourage and facilitate research into the theory and practice of adult continuing education;
- act as a focal point for staff, academic assistants, research students and others with a common interest in the field of research, to enable them to assist each other and to facilitate a discourse about continuing education research;
- provide a link for the students on the Department's Certificate, Diploma and Master's degree courses in Adult Continuing Education with the field of CE research, and a forum for discussing their research activities;
- offer consultancy in continuing education;
- forge links with staff with similar interests in other departments of the University and other institutions;
- organise research seminars;
- encourage the publication of research findings.

Previous Publications

Benn. R (ed) Home Alone: A Guide to Independent Study (in conjunction with the Independent Study Unit, 1994). ISBN: 1-899070-01-X

Benn. R & Fieldhouse. R (eds.) 'Training and Professional Development in Adult and Continuing Education' Occasional Paper no. 1 (University of Exeter Centre for Research and Continuing Education, 1994). ISBN: 1-899070-00-1

Contents

	Page
Introduction. **Roger Fieldhouse**	1
Multi-cultural perspectives on adult education: putting policy into practice. **Nancy Gidley**	3
Ageist practice in nursing: the challenge to professional education. **Catherine Cadman**	15
Transporting mathematics from the margins to the centre. **Roseanne Benn**	30
Adult Education and new paradigm research. **Allen Parrott**	46

EDITORIAL INTRODUCTION

Roger Fieldhouse

These four papers cover very disparate themes of adult education but they all deal with topics and approaches which are marginal to the mainstream of adult education - multi-culturalism, ageism, mathematics and new paradigm research. It is our belief that they are all important topics which should become less marginal in the future.

Nancy Gidley describes a number of different approaches to multi-cultural adult education, ranging from assimilation to separation. She examines the implications for the curriculum, access, staff development, resourcing and management of the different approaches. The solutions to some difficult pedagogic and managerial questions depend essentially on an understanding of the various multi-cultural approaches, and decisions about which approach is to be adopted. She reminds us that educational management is not an objective skill, but an ideological tool.

In her paper, Kate Cadman illustrates the limits of education as opposed to practical (clinical) training in challenging ageist attitudes in nurses. The impact of education modules is apparently subservient to 'real' on-the-job training. Indeed, nurses' clinical experience frequently contradicts their 'theoretical' experience in the classroom and clinical staff often prove stronger role models than do teachers. More creative styles of teaching are advocated to overcome this imbalance.

Cadman highlights the limits of a student-centred learning approach in challenging institutional and institutionalised bad practice. Roseanne Benn, in her paper also shows how this student-centred approach easily adapts itself to reinforcing current hegemonic tendencies.

Benn argues that innumeracy and a more general lack of mathematical knowledge are as much a disadvantage as illiteracy in preventing people from participating fully in a democratic society. She believes that at present mathematics occupies a marginal position within adult education whereas adult educators should be tackling this 'disadvantage' just as rigorously as others, in order to equip people to be more active citizens. What is required is a new paradigm for adult education (or the revival of an older one) in which adult education is once again primarily concerned with equality, social justice and critical citizenship. Education for mathematical understanding which contributes to active citizenship should be a major aspect of such a paradigm. But this will require a new pedagogical approach which aims to raise awareness of the political dimensions of mathematics, and challenges the cultural hegemony by

representing alternative paradigms. It calls for a critical mathematics curriculum.

Allen Parrott also advocates a new paradigm for adult educators - in this case for their research. It would avoid the polarities of objectivism and relativism: it would allow a wholehearted commitment to beliefs, meanings and values while recognising the dangers of holding them uncritically or unreservedly. Such a paradigm encourages a participatory form of action research (of the kind practised by Cadman), which places core human values at the centre of the research, and becomes a living learning process. Parrott argues that such a research paradigm, which is more likely to be qualitative than quantitative, is more suited to adult education than methodologies based on orthodox positivism and objectivism because it is more in tune with the best practices in adult education. But it is not an easy option: it requires a high level of intellectualisation and critical self-awareness, to avoid conscious or unconscious deception and collusion.

The authors of the four papers have a wide experience on which to base these research papers. Nancy Gidley (who has recently worked in both LEA community education and in adult education in an FE college) and Kate Cadman (who is a nurse educator) are both past M.Ed. students at Exeter and their papers are based on parts of dissertations. Roseanne Benn is a lecturer in the Department of Continuing and Adult Education at Exeter. Allen Parrott was, until recently, Dean of Business, Leisure and Management at Yeovil College.

These papers were originally presented at seminars organised by the Centre for Research in Continuing Education at Exeter. Roseanne Benn's is an early version of a chapter for a book entitled Adults Count Too, to be published by NIACE in 1996. We are grateful to NIACE for permission to reproduce this version here.

University of Exeter
December 1995

MULTI-CULTURAL PERSPECTIVES ON ADULT EDUCATION: PUTTING POLICY INTO PRACTICE

Nancy Gidley

Multi-cultural/anti-racist education is a highly politicized field. At the head of the political discussion is competition over the definition of terms. A definition, once chosen, will then lead to a corresponding policy and consequent practice.

Multi-culturalism has been on the educational and political agenda since the 1960s, placed there and moved around to different positions in response to successive societal and judicial pressures and initiatives. When framed within the years of compulsory schooling, where the state has a statutory duty to deliver education, the issue of "teaching" multi-cultural education includes the notion of providing education "within" and "towards" a multi-cultural "society".

Because there is no compulsion on the entire population to engage in adult education, which anyway has a multiplicity of other agendas, there have been fewer incentives to address the issue of multi-culturalism within it. Race relations legislation has sought solutions to the tensions caused by white resistance to immigration by restricting the rights of black adults entering and settling in Britain, while education legislation has sought to ameliorate the future situation by proposing a succession of compensatory measures to help black children blend into the mainstream most effectively.

However, adult education must become part of the multi-cultural/anti-racist educational debate. Adult education is strongly identified with the principle of "life-long learning", which by definition encompasses many different constituents. This is precisely why it has the potential to influence an extremely broad range of the population and therefore holds out a promise of effecting real change in societal attitudes.

Adult education can be tailored to community needs. There is no single prescribed curriculum, nor even, necessarily, a specific pre-determined outcome; there is no compulsion to participate; it does not require a long-term commitment; within the staff and student relationship, adult education assumes a partnership based on equality and mutual respect. As part of an academic framework, preparatory Return To Learn and Access courses offer a second chance to large numbers of adults disappointed by previous educational failure or denied an earlier opportunity to enter further or higher education. In a vocational context, whether in a college or in the workplace, existing employees and new trainees seek to enhance employment potential through the acquisition of technical skills and

specialized training. Adult and community centres provide an informal focus for social and personal educational projects and activities. Precisely for these reasons, adult education has the potential to reach out to all ages and sectors of the population. As the Further Education Unit pointed out, "in modern societies, high quality educational provision is by definition provision which is appropriate to a multi-cultural society." (FEU 1989:v) This view extends Hicks' recommendation to schools: "Whether in an area where minorities live or not, the... curriculum needs to reflect the plural nature of society. If it does not, then it fails to reflect reality." (Hicks 1981:2)

Stella Dadzie (1993) prefaces her guide to working with black adults by posing - and answering - a similar question, "Why focus on Black Adult Learners?"

"Developments over the past decade have shown conclusively that those educational practices and opportunities which were intended to promote equality of opportunity have, if properly embedded, proved to be in the interests of all learners. Nowhere is this more evident than in the varied and innovative responses around the country to the needs of black adult learners. The growth of Access provision, for example, has persuaded many higher education providers to target and accommodate not only black students, but mature students generally. Community outreach strategies, too, have encouraged a more consultative, responsive approach to the ...needs of all sectors of the community." (Dadzie:vii)

A number of multi-cultural perspectives on education - assimilation, integration, pluralism, anti-racism and separatism - are commonly acknowledged. This paper examines their application to adult education. Hicks' reference to the curriculum offers a starting point for this discussion. Thereafter, the following issues will be addressed: access, staff development, resources and management. The intention is to demonstrate how purposes and outcomes reflect the policies, thus making clear the relationship between policies and the practices they promote. I will note any important aspects of current practice within each issue; comment on important distinctions in the treatment of an issue from the different perspectives, and abstract any important lessons to be drawn.

Issues of Curriculum

In educational terms, "assimilation" denotes absorption. If the fullest participation in the larger society is only to be attained by incorporation into that society, then complete acceptance presumes a certain accompanying loss of identity as the minority group adapts to the majority dictates. Even the terms "majority" and "minority" indicate the prevailing power relationship. Assimilation is basically a functionalist theory,

concerned with compensatory measures to facilitate the acquisition of skills which, in turn, will promote the necessary conditions for equality of opportunity. Society's moral responsibility is thus fulfilled: educational goals will have been met; further success is the responsibility of the individual.

Such curricular provision can be initiated in a variety of settings, none of which need to impinge on the remaining "majority" of students. Withdrawal units within schools and colleges may offer concentrated specific language tuition, either to support other mainstream courses or to attain a qualifying certification; adult education centres may prefer to focus on less formal "survival" English classes to assist non-native speakers to communicate in everyday language situations. Schools, community and family centres, even health centres may organize parent groups to educate minorities in the cultural norms into which their children are being directed.

The attainment of accreditation or qualifications, which is the pre-determined outcome of most formal academic or vocational courses, imposes curriculum constraints which can hinder the adoption of multi-cultural considerations. The more formal the provision and the more externally determined the outcomes, the more active must be the commitment to change on the part of management if they wish to implement and sustain a multi-cultural educational policy which addresses more than the compensatory conditions promoted through assimilation. Nevertheless, the transition from assimilation towards pluralism *can* be relatively uncontentious once the multi-ethnic nature of British society is acknowledged.

Community education is well-placed to support a number of "integrationist" domestic and cultural activities. The traditional fare of leisure classes already offers a generous helping of health and fitness, food preparation, arts and crafts and languages. It would require little change to add a slightly wider diet of "ethnic" cookery, dance, music, decorative arts, complementary health and community languages to the programme. Such activities are already increasingly celebrated through neighbourhood fairs and festivals. They are also, importantly, a way of respectfully inviting adults who may be parents into an active involvement with education - with teachers, children and other parents - to share their cultural knowledge and skills.

But addressing the needs of under-represented groups within a multi-cultural society need not - indeed, it might be argued, should not - be confined to extra measures to get them on board. If the frame of reference is broadened so that adult education seeks to bring in such groups to participate in a system which will reflect the mosaic/pluralist nature of

society, then a different curriculum will be required. The wider the frame of reference drawn, the more complex become the implications: needs will change, demands may alter, responses must adapt, while priorities may conflict.

Proponents of "pluralism" in all its forms are working towards respect for diversity through increasing inter-action between black and white, despite the distance between acceptance of the mosaic nature of British society as a source of mutual enrichment and a total commitment to "anti-racism" which requires a breakdown of Eurocentric dominance. Separatists, however, in turning the tables and completely rejecting the dominant culture, strain more traditional calls for tolerance and understanding between cultures because they seem to be saying that multi-culturalism is irrelevant and they expect no more of anti-racism.

"Separatism" demands the preservation of a separate identity. Proponents of separatism reject diversity. They demand instead the right - and the resources - to define and determine the future for their own groups. This may be particularly hard for the dominant system to accept, because it is ultimately demanding respect - and support - for an ideal which is fundamentally exclusive.

Issues of Access

Adult education purports to retain its liberal commitment to change society, but in practice evening classes often reflect the status quo. It is commonly accepted that non-vocational adult education is taken up by roughly 15 per cent of the population, approximately the same group who succeeded first time round. Given this scenario, there is an urgent need for providers to address their declared commitment.

First Steps courses, devised by colleges, community workers, training agencies, usually concentrate on compensatory, preparatory work leading to the next level, which is often entry to a mainstream course. Similar compensatory measures have been directed at other identified disadvantaged groups as well; promoting such concerns is defended because one of the declared aims of adult education is to offer a second chance, and blacks are disproportionately represented among first-time low achievers.

However, under-represented groups need to feel wanted and included if they are to participate. This means positive strategies for recruitment as well as for inclusion in the curriculum. Publicity provides the first view most potential users have of an organization. As well as the obvious written and visual information about the provision or programme offered, publicity also provides coded information to its intended audience. What

is the format of the publicity, where is it located and how is it distributed? Is it written? Is it oral? Is it formal or informal? Who are the existing users? What image is presented of the provider? What type of language is used to convey the information; indeed, what *language* is used? In other words, *which members of the community is the organization welcoming*? Different answers to these questions will be found, depending on perspective.

Careful preparation and thought must be given to these hidden messages. Publicity written totally in a community language may attract non-English speakers or beginners, but it may also deter more proficient bilingual speakers who may feel patronized or ghettoized by this approach. Additionally, such language use creates an expectation that interpreters will be available if speakers of those languages turn up. Instructions for making contact - obtaining information, making an application, demonstrating eligibility, following directions, knowing where and when to turn up, how to get there and who to speak to - all help to determine who actually gets in the door. Named people, drop-in sessions at accessible times and in accessible locations can provide welcoming first steps for the unconfident or new learner.

Placement and format of publicity also carry crucial secondary messages. Visual representations of an organization depict the intended audience and the specific setting for their learning; as such, they give coded information to the potential student about the other learners, about the approachability of the institution, about the style of the learning. Language - both the vocabulary and volume of text - suggests the level of proficiency expected of the learner as well as giving an intimation of the formality of presentation of the programme.

Targeted publicity can reach a range of receptive audiences in a variety of specific settings. Posters displayed on notice boards in libraries, health centres, shop windows, church halls, schools and play groups attract people as they go about their daily lives in familiar neighbourhood surroundings. Adverts and articles placed in community newsletters and local newspapers respond to people seeking information. Local radio interviews and public service announcements may catch an unexpected ear; flyers and leaflets delivered door-to-door or left in public places in the community allow the potential learner to reflect at leisure; religious and community leaders, doctors and health visitors, social workers, employment advisers can guide clients towards appropriate programmes if they possess the relevant information.

Research on minority populations is only just beginning to attract the attention of the adult education research community in Britain. Following up earlier research into the communication skills needs of adults whose

mother tongue is not English (ALBSU, 1989a,b), the Adult Literacy and Basic Skills Unit expressed its intention to look further into the effectiveness of language support which has become available during the ensuing years. In 1992, the Department of Employment funded a survey by Naomi Sargant " to provide information about participation in education and training by adults from selected ethnic minority groups resident in Great Britain." (Sargant 1993:1) Interestingly, this survey incorporated some of the questions from ALBSU's
A Nation's Neglect (ALBSU, 1989b), which had been organized by language rather than by ethnic group. Stella Dadzie's practical guide, *Working with Black Adult Learners*, identifies good practice in policy development, curriculum and support. Her book provides an invaluable resource for providers concerned to meet the educational needs of black adults. In her foreword, Dadzie observes that "the sheer diversity of potential needs, issues and learning contexts precludes the production of a definitive resource." (Dadzie 1993:v) However, as studies such as these demonstrate, if there is to be any meaningful commitment to greater inclusion of blacks in society, there are a number of issues which must be addressed, and some of these, at least, imply looking in non-traditional ways. As Jovita M. Ross-Gordon has pointed out, "If we truly listen to learners representing multi-cultural perspectives we must be open to looking at the world from their perspectives." (Ross-Gordon 1991:10)

Issues of Staff Development

As the practitioners engaged in the delivery of education and inter-acting with the students, it is obvious that staff training is vital to the development of good multi-cultural practice. Whatever perspective is being followed, new skills will need to be acquired: in subject matter, teaching methods, human relations and cultural awareness. Unfortunately, adult education operates under particular constraints which make a straightforward issue potentially problematic. Once one leaves the statutory sector of education, teacher training becomes less standardized. Some adult teachers are school teachers who have moved on from a child-centred background; there are also many subject specialists and professionals who have turned to teaching - or been wooed to the profession for their specialist expertise - who have had no teaching training at all. Additionally, there are many part-time staff in adult education who have not only had minimal access to initial training, but have even less access - in terms of time or funding - to in-service training.

Even if addressing the needs of black adult learners is focused merely on skills acquisition, ESOL teaching techniques are fundamental. Teaching methods and materials will need to be devised which are accessible to students whose English language skills can not be taken for granted.

Specialist staff will need to be nurtured; a range of teaching models - 1:1 tutoring, classroom support, team teaching - will need to be promoted.

The greater the commitment to reflecting the pluralism of society within the adult education provision, the wider will be the staff development implications; such broader needs will become apparent as the policies initiated from the top spawn practice which is promoted all across the institution. In a pluralistic organization which actively targets new black adult learners, guidance roles increase, outreach workers link with the local communities to play key roles in bringing in new students, and community-based tutors develop informal styles appropriate to non-institutional settings and first-time learners. The advisability for *all* teachers to be able to offer some language support, the need for *al* teachers to develop greater cultural and racial awareness, become self-evident.

An anti-racist environment requires new agendas for adult education. An organization which reflects the varied community it serves will want to encourage recruitment of black teaching staff, if necessary through a policy of positive discrimination. As well as targeted publicity which encourages black and ethnic minority adults to come forward for employment, open days and information sessions can offer guidance and jobsearch skills to potential black tutors. As a result of such promotion, it is more than likely that there will be subject specialists in some areas who may not have teaching expertise; relevant teacher training, accreditation and qualifications become crucial issues if new staff are to have the confidence to participate fully and confidently in
the life of the institution. In addition to providing opportunities for staff to obtain the City & Guilds 730, which is a widely-accepted basic requirement for teaching in further and adult education, Dadzie suggests opportunities such as Access to BEd or teaching courses for overseas qualified teachers. (Dadzie:64)

As was noted above with regard to recruitment of non-traditional learners, it is equally true that if non-traditional staff with non-traditional skills are sought - as they must be, within a pluralist, anti-racist or separatist perspective - then non-traditional approaches will need to be applied to acknowledge and grant accreditation to qualifications which more appropriately reflect the culture shift taking place. New black staff may have learned their specialisms in different academic or vocational contexts; they may have studied overseas, through different educational systems; they may have acquired their skills through practical experience and application. Accreditation of Prior Experience and Learning (APEL) can be an important process towards providing formal recognition for such knowledge and skills. Equally, if the commitment to the encouragement of staff diversity is to be more than a token one, then opportunities must be

provided for new staff to address additional learning needs and attain other relevant and complementary competence.

Personal development training will include areas such as interpersonal skills, assertiveness training, guidance and counselling skills. In communities with bilingual populations, language training is vital, whether staff are working in outreach roles or providing language support for students on college courses. Language training can comprise learning new languages as well as language analysis and language need diagnosis. Equally, specialists brought in for their bilingual skills may require English language training. Translation skills may be advantageous where staff are working in a bilingual setting.

It is important that additional learning needs are not just seen in compensatory terms as bringing black staff up to scratch. Such an attitude would be unacceptably assimilationist. In a multi-cultural educational community, many of the above training needs will be shared by white staff who are working with black students and black communities. It is also likely, in a multi-cultural educational community, that staff members will represent different cultures. Understanding differences among colleagues, and making allowances for them, is vital if such a team is to function properly.

Finally, as Dadzie has pointed out: "The confidence of black staff, once in post, can be easily undermined if colleagues are resentful or unclear about the criteria and rationale for their recruitment." An anti-racist staff development programme will provide an opportunity for all staff to "discuss the arguments for positive action, the targeting of under-represented groups, and other key aspects of the institution's anti-racist policy." (Dadzie:64)

Issues of Resources

The more comprehensive the multi-cultural aims of the organization, the greater will be the demands for allocation of resources to carry them out. Language proficiency is a feature of all multi-cultural initiatives, so the provision of language support provides a useful vehicle to explore the way that the perspective of the initiative will determine the breadth of the implications of this issue: whether these include materials such as books, tapes and other equipment; premises such as language workshops, resource bases, teaching, learning and counselling spaces; or staff in academic, administrative, support and specialist roles. There may also need to be a prior fundamental decision as to what actual language or languages are promoted.

An organization may wish to concentrate on opportunities for its existing clients to improve their language competence so that they may more successfully access the wider programme on offer; such an assimilationist approach will focus on compensatory and support materials and staff to facilitate this aim. An organization which is anxious to encourage greater black/white integration will need to look at support in a more comprehensive way: most crucially from a resource point of view, double staffing may be necessary, course materials will need to be re-written to provide on-going language back-up while enabling the unconfident black adult learner to participate in the mainstream programme, and in order to ensure successful integration, meeting time will need
to be allotted for relevant staff to liaise and plan together.

An organization which is specifically targeting new black learners will need to spread its resources into the wider black community. Community consultation and outreach may require bi-lingual staff and additional premises in new locations. Such initiatives will require a policy of positive discrimination that extends to the allocation of resources.

Issues of Management

Ultimately, all the above issues rely on management because the commitment or adjustment of staff, resources, programmes, community accountability all rest with the management and will be promoted within a policy framework. The commitment of management not only to setting out a policy, but to monitoring and evaluating it, provides both the internal teeth to ensure that it is implemented effectively across the organization and the public face that tells the external community that it means what it says.

In the opening pages of a Policy Studies Institute report on multi-racial policy and practice, Ken Young and Naomi Connelly (1981) observed:

"all manner of marginal adaptations can be made by practitioners (even without the authority of "policy") to provide service more appropriate to a multi-racial society... there are areas... where the most important adjustments have to be made at the level of the individual practitioner. Yet there are other areas of broad corporate and departmental policy where change cannot be made without the explicit recognition and discussion of race and its implications for public policy. In the broadest sense, explicitness is a necessary (though never a sufficient) condition for appropriate action. (Young and Connelly:2-3)

Their report is sprinkled with examples of "marginal adaptations", such as occasional notices in community languages; informal *ad hoc* interpreting

arrangements, which depend on staff or personal contacts who can speak a particular language; enthusiastic individuals who initiate one-off community projects; minor adjustments to standard services, such as provision of vegetarian meals in adult centres.

They point out that in matters of consultation, a key management question is how far a local authority can take account of the range of minority opinions in the community and to what extent it is prepared to create channels for the expression of those opinions. In our post-ERA society, the same duties accrue to individual institutions. "Effective consultative arrangements are those which provide for the direct expression of minority opinion to those who have the power to make decisions. No single mode of consultation will suffice to meet the requirements of flexible and responsive policy making." (Young and Connelly:45)

Once more, it is obvious that the particular multi-cultural perspective which is adopted by management will determine the role of community consultation in the formulation of policy and its delivery through practice. A minimal assimilationist form of multi-culturalism can be attempted unilaterally by senior managers acting according to their pre-confirmed beliefs, and the resulting considerations incorporated into existing strategic planning documents with correspondingly minimal allocation of resources. These considerations can then be transposed to a broad equal opportunities policy document which can be implemented with minimal change to existing practice and correspondingly little impact on the service or the local population. Community perspectives will influence these procedures only in so far as any individual members of the management team have prior external contacts; community opinion will not be canvassed specifically.

A more pluralist-oriented management will want to confirm the appropriateness of its policy both for its staff and for its clients. Policy will be submitted to a consultative process, including some form of community contact and internal review, to check whether internal perceptions have matched external expressions of needs and to monitor the extent to which these needs are being met.

A management that takes the further step of acknowledging the racism of society and seeks through education to overcome it, will consider consultation with the black community as an integral part of policy-making. The encouragement of wide community participation may extend into taking advice from black and community representatives on its creation and dissemination.

The various ideological perspectives carry a range of management implications. The greater the cultural shift, the more will be required in

terms of initiative and support, and the more pro-active must be their role in ensuring its delivery. If policy is to be translated into effective practice, then specific strategies will need to be outlined to implement them.

In a multi-racial society, management is responsible for creating a corporate ethos which encompasses attitudes to race. Examining corporate arrangements within local authorities, Young and Connelly concluded that corporate aspects are crucial to overall service development, observing that "services seem unlikely to take explicit account of race where the ethnic dimension has failed to secure a place on the policy agenda of the authority". However, their research also confirmed that policy alone is not enough: "in practice we found that the existence of such arrangements in itself signified very little. Race relations machinery may be a necessary condition for the reorientation of corporate policy but it is clearly not a sufficient one." (Young and Connelly: 13)

Dadzie is similarly determined. While she sees the anti-racist ethos of an organization as a necessary starting point, it is not, in itself, sufficient to ensure an institution-wide commitment to anti-racism. "An institution which publicly declares its commitment to anti-racism yet fails to reflect this commitment in the make-up of its staff, the content and delivery of its curriculum and the nature of its extra-curricular provision cannot expect to be taken seriously." (Dadzie:79)

References

The Adult Literacy and Basic Skills Unit (1989a), *A Nation's Neglect: Research into the Need for English Amongst Speakers of Other Languages*, (London: ALBSU)

The Adult Literacy and Basic Skills Unit (1989b), *English for Speakers of Other Languages: A Programme for Action*, (London: ALBSU)

Cassara.B (ed.) (1990), *Adult Education in a Multi-Cultural Society* (Routledge)

Dadzie.D (1993) *Working with Black Adult Learners: A Practical Guide*, Leicester: (NIACE)

Foden.F (1992), *The Education of Part-Time Teachers in Further and Adult Education* (University of Leeds)

Further Education Unit (1989), *Black Perspectives on Adult Education: Identifying the Needs* (FEU)

Hicks.D (1981), Minorities: *A Teacher's Resource Book for the Multi-Ethnic Curriculum* (Heinemann Educational Books)

Sargant.N (1993), *Learning For a Purpose: Participation in Education and Training by Adults from Ethnic Minorities* (London)

Ross-Gordon.J.M. (1991), Needed: A Multicultural Perspective for Adult Education Research,
Adult Education Quarterly, Vol. 42, No. 1

Young.K and Connelly.N (1981), *Policy and Practice in the Multi-Racial City*, Final Report of a study carried out by the PSI for the Home Office Research Unit, (PSI No. 598)

AGEIST PRACTICE IN PRACTICE IN NURSING: THE CHALLENGE TO PROFESSIONAL EDUCATION

Catherine Cadman

This paper examines the role of nurse education in challenging ageist attitudes amongst pre-registration student nurses in the delivery of health care to older people. It addresses the concept of ageism as it is presented in the literature and then goes on to describe a study which sought to explore the existence of links between expressed attitude and behaviour towards elderly people by student nurses.

Data for the study were generated using several approaches e.g. assessment of knowledge regarding ageing processes, attitude assessment scale (modified KOP Scale), informal discussions and interviews with respondents and through participant observation.

Results may indicate that student attitudes are more strongly influenced by clinical experience rather than education. Students expressed degrees of dis-satisfaction and anxiety throughout their clinical work primarily because of their experience of the theory/practice gap. Clinical nursing staff presented stronger and more immediate role models than nurse teachers who whilst not appearing to promote ageism, did not challenge its manifestations either in class or in the curriculum.

The relationship between expressed attitude and behaviour was contradictory in the majority of respondents. Students, qualified nurses, and nurse teacher groups all scored favourably on the attitude assessment scale but these positive scores did not appear to consistently translate into observable positive behaviour towards older people.

Introduction

> *"There is an ambivalence at the very root of our being. Personal affection, a sense of duty, a desire not to hurt or reject and a deeply conditioned belief in the value of individual life impel us to honour, protect and defend and to extol the value of older people. On the other hand there are feelings which cannot with decency, be openly expressed which are shown in all sorts of subtle and not so subtle ways - feelings such as contempt of the young and strong for the old and weak; fear of the mortality which old age represents; guilt which translates itself into anger; and resentment over the need to use scarce resources and precious time on people 'who have had their life'. In short they express themselves in 'ageism' "(Norman, 1987)*

So begins the Centre for Policy on Ageing's "Aspects of Ageism" (Norman,1987) which examines its effects upon health and social care in contemporary Britain. Problems associated with ageing and the elderly are, in part, the product of a social construction of ageing. (Tyler,1986). This process shapes the views held about the elderly and determines the direction of treatment and the shape of social policy by professionals and policy makers. It has been argued that systematic distortion of definitions about the aged occurs as a result of both psychological and societal factors. Both as individuals and as members of society, we find it difficult to be honest about our attitudes to old age and old people. Many of the policies and procedures which masquerade as being 'in the client's best interest' are but thinly disguised attempts to diminish the status and autonomy of these individuals. (McWilliam et al 1994)

In reviewing the literature there is much to suggest that ageism is present in most spheres of life. Levin and Levin (1980) feel that the term suggests stereotypes or negative and erroneons beleifs towards the elderly. Butler (1975) identified five of these 'myths' about growing older such as withdrawal or disengagement from everyday life, inflexibility of attitude, slowness, and a tendency to become cantankerous and feeble, but this list could easily be extended.

Significantly, Norman (1987) and Victor (1987) highlight the negative aspects of the nature of these ideas, emphasising their ability to devalue older people, who become to be viewed as dirty, bad, non contributive, diseased, lazy etc.

These particular myths are highlighted by either conscious or unconscious patronisation with benign tolerance often heaped by a child or grandchild upon parent or grandparent. This may result in a form of reversed transactional analysis between child and parent. This form of ageism is perhaps most highly developed by nursing and medical staff.

Homogeneity is an important aspect of stereotyping and by its nature it assists the process of depersonalisation. In depersonalising and stereotyping older people health professionals fail to recognise or respond to their individuality. This can lead to a failure to consult them on important issues regarding decision making and choice in health care options.

The myth of senility, increasing decrepitude and inevitable morbidity in the elderly is extremely strong amongst health professionals. (Kay 1984)

Many professionals, like older people themselves, are resigned to thinking that illness is a necessary aspect of ageing which must be accepted at face value. (Williamson, 1984). The significance of this myth relates not so much to the facts of the slowing reactions which many elderly people do have, or to the increased frequency or duration of illness episodes which some old people do experience, but rather to the pejorative behaviours which result from the notions that all elderly people are so afflicted. The next step is the transference that illness equates with helplessness, stupidity and senility, thus reinforcing the myth of homogeneity. Given this, it is not surprising that there is a lot of unreported illness (Williamson 1984).

A review of the literature

Nurses attitudes towards older people have been the subject of much research in recent years. The elderly are the major users of health services and it is reasonable to suppose that attitudes held by professional workers will help determine the quality of care given to old people. A review of the literature on nursing attitudes towards old people presents confused and confusing picture.

The published work can be reviewed under the following four categories:

(1) The effects on attitudes of the characteristics of the nurses being studied;
(2) Characteristics of the patients;
(3) Education/intervention programmes;
(4) Related attitudes of the nurses themselves.

Within the context of this study it is proposed to focus upon the literature relating to the third category: the effects of interventions in the form of special education programmes upon attitudes of nurses.

Numerous studies have produced conflicting results indicating that education does and does not affect ageist attitudes.

Campbell's (1971) study supports the view that all groups of nursing personnel studied held stereotypical views of older people. The most educated part of the sample were less stereotypical but were less inclined to work with older people. Taylor and Harned (1978) contradicted this view in that they found those who were less educated and less experienced held more positive attitudes than other groups of nurses.

Thorson et al (1974) supported the concept of education as a challenge to ageist attitudes, yet also established that increased age carried increased negative attitudes.

The experience of working with well older people has been documented by Ross (1985) as being beneficial in combating stereotypical views yet Greenhill and Baker (1986) found that the reverse was true. Hooper (1981) replicated previous findings that those with higher educational levels have more positive attitudes. Treharne (1990) concluded that education about ageing actually increased negative stereotyping of older people.

Haight et al (1994) studied the effect of a three year curriculum on ageism over all three years. They found that there were great increases in positive attitudes towards ageing in year 1, that slowly decreased with clinical experience by the end of year 3. For there to be actual improvement in the quality of care of older people, positive attitudes need to be translated into appropriate behaviour. Few studies, to date, have pursued this aspect of enquiry.

Robb (1979) assessed the effect of a course in gerontology on behaviour intentions towards older people on the part of 153 nursing students, and concluded that the course would have a positive effect on behaviour. However, no attempt was made to ascertain whether the intentions were translated into actual behaviour.

Hatton (1977) did attempt to do this: the attitudes of seven registered nurses were measured and their interactions with patients were observed and categorised as positive or negative. The findings showed a positive correlation between positive scores on an attitudinal scale and positive interactions. Like many studies carried out by nurses, Hatton attempted a statistical analysis of her results, which is inappropriate when working with such a small sample. The attempt to relate attitude to behaviour gives some indication of the raison d'etre of most attitude scales i.e. to say something about nurses behaviour actual or potential with old people. However, the methodological difficulties encountered in trying to achieve this are highlighted by the two studies reviewed but such difficulties have not dissuaded this attempt to remedy the omission of this important dimension from current research data. The main aim of this study was to use Hatton's work as a basis for the examination of the relationship between expressed attitudes and observable behaviour amongst a group of pre registration student nurses and their qualified nurse supervisors towards their elderly patients in the clinical setting.

This involved a small number of students and qualified nurses including tutors and as such its limitations are realised but it did allow for the relationship between expressed attitudes and behaviour to be captured and analysed.

The Purpose of the Study

The purpose of the investigation was to examine the role of nurse education in challenging ageist attitudes amongst pre registration student nurses in the delivery of health care to elderly people. Other research studies have documented this tendency towards negative stereotyping of the elderly by student nurses, yet the relationship between this phenomenon and education appeared largely unexplored. Therefore the following questions were posed:

Do nurse teachers contribute towards negative stereotyping of elderly patients by pre registration student nurses? Secondly, to what extent are student attitudes shaped by educational experience compared with the experience of working with elderly people in the clinical areas? Finally what is the relationship between expressed attitude and actual behaviour towards elderly patients in the clinical setting?

The Subjects

Pre-Registration Student Nurses

The group consisted of eleven students undertaking a three year course leading to the qualification of Registered General Nurse. The course is divided into modules of experience in order to facilitate the relationship of theory to practice.

Towards the end of the first year, they commence a twelve week module on nursing elderly people. This experience comprises one week of theory which takes place in the college and serves as an introduction to the subject, followed by ten weeks practical work in the clinical areas and ends with one week's 'reflection and consolidation' in the College of Nursing.

The ages of the students ranged from 18-42 years, the majority of which were under 25 years.

The Qualified Nurses

The group consisted of ten nurses, seven of whom were qualified as registered nurses and threes as enrolled nurses. Three of the registered nurses were employed at 'sister' grade and were in charge of three respective clinical areas. The remainder of the group worked in all three areas.

Ages ranged from 22 years and 50 year old.

Two of the group had worked with the elderly for less than two years and the remainder had worked with elderly people for more than five years.

All group members were used to working with student nurses and were involved in teaching on an informal basis.

The Teachers

Four teachers were responsible for educational input and assessment of learning during the module. They were all female, ages ranged from 36 years to 50 years.

None of the teachers had specialist knowledge or an interest in nursing elderly people.

They had been involved in nurse education for an average of eleven years.

The Methodology

Three groups of four nurse teachers, eleven pre-registration student nurses and ten qualified nurses each completed an attitude assessment scale at the commencement of a twelve week module on nursing elderly people. The attitude assessment scale was adapted from the Kogan Old People Scale and had been devised by researchers at the Department of Geriatric Medicine at Leicester General Hospital. Thirty items which typified the attitude of the uninitiated towards the discipline of caring for older people were selected and presented as a Likert Attitude Scale. Each item was scored 1-5 with 5 representing the most favourable response and 1 the least. Five subscales were identified to facilitate analysis and interpretation of data. Palmore's (1977) Facts on Ageing Quiz was used to establish knowledge levels reporting the process involved in ageing pre and post clinical experience. It is short, easy to administer and confined to factual statements. Informal discussions on feelings and attitudes towards elderly people and about working with elderly people were conducted at the beginning, during and at the conclusion of the module with students, staff and teachers.

Each of the three groups were observed at work. The nurse teachers were observed on an individual basis during teaching sessions in the introductory and final week in the College of Nursing and also during the weekly afternoon tutorials on the wards. The qualified staff and students were observed whilst working with elderly patients throughout the students' ten week practical allocation on the wards. Observations took place at shift 'handover'. I also observed both groups of nurses interacting with patients, relatives, other members of staff and each other during the busy morning shift.

Observations were carried out in the clinical areas; acute, rehabilitation and continuing care. Patients admitted to an 'acute' ward are usually those

whose illness has been sudden and unexpected, which means that they are viewed as being highly dependent on nursing and medical care. It is important to stress the differences between these wards or clinical areas as the degree of patient dependency has been shown to influence the attitude of the nurse significantly i.e. the greater the degree of patient dependency, the less positive is the nurses attitude (Brown 1969 and Fielding 1979).

Observations and impressions were discussed with the qualified staff and students together whenever possible, but mainly with individuals in the afternoon directly following the morning's observation. In this way I acted as a participant observer, clarifying, questioning and at times challenging behaviour, views and comments of the students and qualified staff in order to try to understand their perspectives.

The observations were classed according to the category identified, and behaviour categories adapted from Hatton's (1977) study were used in order to identify positive and negative interaction with patients.

The Attitude Scale and Facts on Ageing Quiz

In the attitude assessment a score of 120 points or more indicates an 'unequivocal favourable' response, whilst a score of 90 or more showed a 'more favourable than unfavourable response. A score of less than 90 points indicates an unfavourable or negative attitude towards elderly people.

None of the three groups scored more than 120 points and none scored less than 90 points. Therefore all three groups showed a more favourable than unfavourable response with students showing the least positive attitude of the three.

In Palmore's Facts on Ageing Quiz student scores were between 20 and 15 and the group average score was 18.6 before the module commenced. Following the twelve week experienced scores had increased by an average of 2.7 marks indicating a slight increase in knowledge.

In summary, all three groups had positive attitudes towards elderly people, with students having the least positive of the three. Nursing elderly people was seen as a good career choice by all three groups with students again showing less certainty than the other two groups. All three groups appear to value nursing skill with students valuing it least and all three groups appear to value knowledge of medical management of elderly people very highly. The multi-disciplinary approach to caring for elderly people was seen positively by all three groups with nurse teachers having the least

positive attitude. General knowledge about ageing appears to have increased over the twelve week course.

Informal Interviews with Teachers, Students and Qualified Nurses

Several themes seemed to emerge from discussions with the three groups. Teachers and qualified staff appear to feel that the main benefit for students of working with elderly patients is that they learn 'just good basic nursing care' yet neither group were able to describe how that might be achieved.

The qualified staff did seem to hold fairly negative views regarding working with elderly people, seeing it as offering poor career prospects, as less demanding in terms of nursing skill and one member of staff describing it as 'often distasteful'. There was a feeling that once the students had 'picked up the basics' then there was not that much left to learn in the module, which perhaps again indicates a view that nursing elderly people does not require very much skill. On the question of how rewarding and enjoyable various activities were, talking to patients was seen as most important, although this was not observed in any significant measure.

Students on the whole did not seem to hold ageist views regarding the work with elderly people, recognising that what they perceived to be established patterns of care, militated against choice, and the right to be treated as an individual for elderly patients. They also appear to feel that their own lack of experience and expertise in nursing elderly people results in a poorer quality of care for patients and relatives.

However, like the qualified staff and the teachers, students viewed nursing as being 'basic' i.e. not demanding a high level of skill which not only reflects a significant degree of ignorance but might also been seen as ageist.

The theory-practice gap appears to be in evidence and proved to be a problem for both students and qualified staff alike, with both groups blaming the teachers, with teachers generally seeing their role as reduced in the clinical area due to pressure from other work.

Students seem to deeply resent their allotted role as agents for change, recognising that they are not empowered to make such change. Nurse teachers in contrast to the other two groups do not appear to feel so strongly about the theory-practice gap. Perhaps this is because they are not having to confront it directly as they do not appear to have a significant

presence in the clinical areas.

Participant observation during clinical nursing practice and theory teaching sessions

Three of the teachers appeared to be 'ageist' in attitude in several ways. Firstly they occasionally used derisory names when referring to elderly people and secondly they did not challenge ageist views when expressed by students. Teaching seemed to be fairly traditional in content and generally did not address itself to encouraging students to examine current practice and assess the feasibility of new models. This may result in perpetuation of traditionally authoritarian values and conservative approaches to caring for elderly people.

Teachers did not seem to disagree with students in their choice of medical topics for study whilst in the clinical areas. Perhaps this reinforces the students view that medical knowledge is more important, and has more status than nursing knowledge and expertise.

Planning the educational content of the module seemed to be an uncomfortable and ineffective exercise, with students not really knowing what they needed to include, yet feeling pressured to 'come up with something'. Beth Humphries (1988) draws attention to the consequences for clients and patients if this interpretation of student centred learning is adopted by an institution as it offers no strategy for combating or challenging institutional oppression.

The gap between what students were taught and what they were doing on the wards was clear at times. Students are taught to use models of nursing when planning care. In 'the real world' of the ward, this does not seem to happen in any observable or demonstrable way. Assessment and evaluation are given scant attention in comparison with the activity of prescribing nursing interventions. What one sees is a haphazard approach to care within a ritualistic framework, not the systematic approach described in such detail in 'the school'. Routinised care is characterised by its subordination of the patients into the 'dependent sick' role.

The ability to communicate with the patient and relatives is regarded as being highly important by nurse teachers, yet communication appeared to be conducted at its most basic level i.e. giving instructions to patients, by students in the ward. When challenged about this students do not seem to be aware of their limitations in this area.

When in 'the classroom' , students talked positively about elderly peoples' 'right' to privacy and dignity, yet in the ward were observed, reducing both in an uncaring and insensitive manner.

Qualified staff seemed very skilled in engaging patients in talking. These skills were used very effectively in a therapeutic way, e.g. encouraging patients to reminisce. However, they did not seem able to help student to acquire these skills.

Students are taught that nursing knowledge and skills are of paramount importance in the delivery of good care. This is underlined frequently by nurse teachers, yet the patients medical diagnosis and medical treatment are clearly considered to be more important than this by the qualified nurses judging by their predominance in 'ward reports' and tutorials. Nursing care remained clearly focused on patients physical needs, which must call into question the reality of the concept of 'holism' in nursing practice, which is currently strongly promoted by education.

Students experienced 'feeling pressured to get the work done' whilst not seeing any reason why it should be finished by lunchtime. Patterns of care seemed to reflect the needs of staff rather than the patients. This was another area of conflict for students who were assessed by qualified staff according to their ability to conform and work speedily.

The role of the nurse as defined by nurse teachers often seemed at variance with that of the observed role on the ward. The majority of the qualified staff do not appear to be sufficiently confident or assertive in articulating their views on patient care to other members of the multi-disciplinary team, especially medical staff.

Interaction between patients and staff was noted to be functional and directive in nature with staff interacting most with demented patients and considerably less with the lucid. Staff and students were, in general, minimally involved in conversation with patients. This would have been a more expected finding during the morning shifts when speed in getting the work done appeared to be important, but was a surprising finding during the quieter afternoon shifts when nurses and patients generally interacted within their own groups, not with each other.

Discussion

The clinical environment can present a threatening prospect to students. They are placed in unfamiliar settings which demand skills not yet acquired. They may even perceive themselves in a 'sink or swim' situation. They naturally seek out 'paths of least resistance' in an attempt to alleviate these insecurities. Students not only have to deal with 'the shock of the new' but their performance is also being continually assessed by the qualified staff. It seems hardly surprising then that students, by and large, tend to be conformists in the clinical area.

The areas of conflict between theory and practice are obvious because they are large and important. Education defines nursing as being 'holistic' and involving a 'systematic approach to care'. Qualified clinical nurses often describe it in these terms also, but it is difficult to observe in practice. Perhaps nurses are unable to translate the theory into practice because they do not interpret it in the same way as educationalists. Clearly the psychosocial aspects of care are consistently neglected by nurses.

Communication skills are also a vital part of nursing care yet appear to be neglected in favour of aspects of patients physical care. Qualified staff were skilled in these areas, but students were not. Students receive a good deal of information about the importance of good communication yet very little about 'how' to do it. Perhaps this should be addressed by nurse teachers as acquisition of these skills is not as simple as it is often supposed.

It was disappointing to discover that such a strong medical ethos still exists in 'care of the elderly'. This specialty offers nursing the opportunity to develop professional autonomy as it is not seen as 'attractive' by medical staff. Consequently it is one of the few specialties where the concept of the multi-disciplinary team has developed. Nurses in the study seemed unable to take a full part in the team and so acted as poor role models for students. This might be remedied by confidence building or assertiveness skills training courses.

It was surprising to observe that in spite of all the work that has been done in 'auditing' wards for student training, traditional, i.e. task orientated patterns of care are still in existence. This must cause great confusion for students who are trying to implement individualised care for elderly patients.. It was wholly understandable that students felt angry about what they were taught in the school as they were told 'why' it could not work ' in the real world'. Clinical staff make much stronger, more credible role models for students, than teachers, therefore their views of nursing and patients were paramount.

However, students were observed adopting many of Hatton's descriptions of positive behaviour towards the elderly patients and the patients themselves said that they were generally very happy with the way they were treated. Perhaps the students and qualified staff's obvious warmth and affection for individual patients compensated for their lack of skills in other areas.

Although all three groups in the study had 'more favourable than unfavourable' attitudes towards elderly people, the investigation seems to

suggest that ageist practice exists in the clinical areas and that students and qualified staff need help in recognising it as such.

Nursing needs to define and value its own body of knowledge and in order to do so current ideas about models of care need to be questioned, not reinforced. Perhaps education needs to play a greater part in this process by re-examining its view of 'student centred' and 'self directed' learning.

Teachers may be reinforcing negative stereotypic views of elderly patients as a result of their attempts to use humour in teaching, which highlight their own value systems perhaps indicating that they have an ageist perspective themselves. It may also result in students recognising this as part of the 'hidden agenda' and assuming a similar 'licensed' perspective. This finding could be considered to reinforce those of D'A Slevin (1991) and Treharne (1990). Haight (1994) concluded that nurse education does not promote ageism, but the more important question is 'does it offer any challenge or agenda for change in behaviour?' The data here would suggest not.

The adoption of more creative styles in teaching might offer a solution , e.g. role play and feedback on performance in communication skills workshops. Sessions might address such topics as communicating with patients who have a sensory deficit, grief and bereavement counselling, becoming more assertive or transactional analysis. Student nurses' attitudes towards different teaching methods were measured (Harvey 1990) and analysis of variance showed that no difference in attitudes existed even accounting for the variables of gender, age and scheme of training. This suggests that nurses could be considered as a single homogeneous group when planning teaching strategies.

The obvious reaction to these findings is to suggest that professional education, both at qualifying and continuing education levels, requires a major review. Perhaps one should start by acting on the findings of this investigation and introduce more structure and planning in study programmes to meet the students needs, as this appears to be lacking at present.

The interviews and observations would seem to suggest that the students' clinical experience is by far the strongest factor in shaping students' attitudes and behaviour towards elderly patients. Therefore, it would seem reasonable for nurse teachers to work more closely with qualified staff in an effort to help them to create and maintain a good learning climate for students, encouraging the development and facilitation of reflective practice for both qualified staff and students.

Once nurse educators realise and accept that their role is not to remain clinically competent but to become more educationally competent in supporting colleagues in clinical nursing, the gap between theory and practice will begin to be more clearly understood.

Findings, such as those presented in this investigation may have implications both in term of wider social policy concerns and in a more specific sense for those in nursing.

However, there is a need for caution in terms of accepting conclusions based on such a small scale study. The most valuable outcome of this work is that it demonstrates the need for more research of a qualitative nature into the professional socialisation processes which are operating in nursing and their effects in shaping attitudes towards older people.

References

Butler, R N (1975) Why Survive? Being Old in America. (Harper and Row. New York)

Campbell, M E (1971) A Study of the Attitudes of Nursing. Personnel towards the Geriatric Patient: Nursing Research 20. 147-151

D'A Slevin, O (1991) Ageist Attitudes Amongst Young Adults. Implications for a Caring Profession Journal of Advanced Nursing 16. 1197-1205

Fielding, P(1979) An Exploratory Investigation of Self Concept in the Institutionalised Elderly and a Comparison with Nurses Conceptions and Attitudes. International Journal of Nursing Studies 16. 345-354

Gott, M (1983) The Preparation of the Student for Learning in the Clinical Setting in Bryn Davies (ed). Research into Nurse Education. (Croom Helm)

Greenhill, E D and Baker, M F(1986) The Effects of a Well Older Clinical Experience on Students Knowledge and Attitudes. Journal of Nursing Education 25(4) 145-14 7

Haight, B K, Christ, M A Dias, J K (1994) Does Nursing Education Promote Ageism?
Journal of Advanced Nursing 20(2) 382-390

Harvey, J J and Vaughan, J (1990) Student Nurses Attitudes Towards Different Teaching/Learning Methods. Nurse Education Today 10. 181-185

Hatton, J (1977) Nurses Attitudes Towards the Aged Relationship to Nursing Care Journal of Gerontological Nursing 3 21-26

Hooper, J E (1981) Geriatric Patients and Nurse Learners Attitudes 2. Nursing Times 77 43-44

Humphries, B (1988) Adult Learning in Social Work Education: Towards Liberation or Domestication Critical Social Policy Issue 23. 4-20

Kay, D W et al (1984) Old Age Mental Disorders in Newcastle upon Tyne. Part 1: A Study of Prevalence. British Journal of Psychiatry 110. 146-158

Levin, J and Levin, W(1980) Ageism: Prejudice and Discrimination Against the Elderly. (Wadsworth, Belmont, California)

McWilliam, C, Belle Brown, J et al (1994) A New Perspective on Threatened Autonomy in Elderly Persons: The Disempowering Process Soc Sci Med 38,2 327-338

Norman, A (1987)Aspects of Ageism. Centre for Policy on Ageing. (London)

Palmore, E (1977) Facts on Ageing. A Short Quiz. The Gerontologist 17 315-320

Robb, S S(1979) Attitudes and Intentions of Bacculaureate Nursing Students Towards the Elderly Nursing Research 28. 43-50.

Ross, M M (1985) The Impact of Client Selection on Clinical Teaching Journal of Advanced Nursing 10 567-573

Taylor, K H and Harned, T L (1978) Attitudes towards Old People: A Study of Nurses who Care for the Elderly Journal of Gerontological Nursing 4 43-47

Thorson, J A, Whatley, L and Hancock, K (1974) Attitudes Towards the Aged as a
Function of Age and Education.Gerontologist 14. 316-318.

Treharne, G (1990) Attitudes towards the Care of Elderly People. Are they Getting Better? Journal of Advanced Nursing 15 777-781

Victor, C (1987) Old Age in Modern Society. (Crook Helm, Beckenham, Kent)

Williamson, J et al (1984) Old People at Home: Their Unreported Needs The Lancet, 117-120

TRANSPOSING MATHEMATICS FROM THE MARGINS TO THE CENTRE.

Roseanne Benn

Oh gentle reader, when you see the word mathematics in the title of this paper will you carry on reading or will you shudder and turn away? Have I lost you before you have read a word? This is sadly the effect that mathematics has on many people both the old and the young, the rich and the poor, men and women. The story I want to tell here is only part of a larger one, one which would try to understand and perhaps change this response. But here, with limited space, I want to try to link three of the most important words in my life:- democracy, adult education and mathematics. I want to argue that adult education should provide opportunities for adults to learn mathematics not just for work-related reasons but also more fundamentally because an ease and familiarity with mathematics is a prerequisite to active participation in society and hence to democracy. Though mathematics is taught to large numbers of adults, it is nevertheless seen as marginal to many adult educators. I will argue that this would change within a new paradigm that returns the primary purpose of adult education to equity, social justice and critical citizenship.

Democracy

The term 'democracy' is and has always been a very contested concept and we shall only touch on this complex area sufficiently to give meaning to our subsequent discussion. Raymond Williams (1976:82-86) highlights two main traditions of meaning of democracy (the giving the rule (kratos) to the people (demos). One, drawing inspiration from Sophocles, identifies it as the exercise of power by the mass of the people. The other locates it in the selection of representatives of the people through open elections, in freedom of association, expression and personal human rights. Whether direct or through representatives, it is fundamentally government 'by the people'. In Britain 'representative democracy' has come to be regarded as synonymous with 'democracy' but if it is still ultimately' government by the people' then this exposes a need for an informed public who will intelligently participate in the control of affairs (Fieldhouse and Taylor 1988). Hence democracy involves widespread social and political knowledge and active participation in decision-making by the citizenry. This social and political learning can be, but is not necessarily, emancipatory. David Harris (1990) comments 'participating in decision-making can lead to a reorientation of motivation as individuals are encouraged to accept responsibility for the decisions of the collectivity. Self-regarding may be replaced by other-regarding

behaviour, and democracy may act as a form of political education capable of schooling people, through discussion and persuasion, into adopting socially responsible attitudes.'

Citizenship

The concept of citizenship underpins that of democracy but, in our society, 'citizenship' is an unfamiliar notion. The Commission on Citizenship (1990) found that the word was not in common use and when used it had a diversity of meanings. The nearest formal definition of a consensus view to emerge was that citizenship involves three elements:

- the civil - composed of the rights necessary for individual freedom;
- the political - of the right to participate in the exercise of political power;
- and the social - of the right to live the life of a civilised being according to the standards prevailing in the society.

However most responses to the Commission from participating groups and individuals related to negative freedoms such as the right not to be imprisoned without trial and to responsibilities and duties such as obedience to the law. The Commission reached several conclusions of relevance to our discussion. They argue that citizenship needs to be learnt, that it is not only about rights but also about the everyday participation in our society and that this participation is both a measure and a source of society's success. The challenge to our society is to create ways in which citizens can participate fully and effectively in conditions where all who wish can become actively involved, can understand and participate, can influence, persuade, campaign and whistleblow and be involved on decision-making. The challenge for all educators is to contribute to this vision. However in our society there are major impediments to this version of citizenship and/or active participation. The foremost issue is whether citizenship is a matter of rights or duties. In particular, the previously unquestioned British welfare state commitment to social rights has now been at least partially displaced by an emphasis on social duties (Roche 1992). A government which views citizenship as primarily about duties may not necessarily wish to develop or support an education system which concentrates on rights and active participation. Lack of knowledge is a serious impediment to full citizenship. For example the questions of right *to* citizenship and rights *of* citizenship are not clear. Structural inequalities and social disadvantage also restrict active citizenship. Many social factors such as poverty, ill-health, gender, race or age may disadvantage parts of the population and prevent their participation. The Commission noted these barriers but focused mainly on encouraging citizens to work in a

voluntary capacity despite noting their concern that 'voluntary effort is being used to compensate for the deficiencies of the public service' (p33). They found that many people do contribute voluntarily 'to the common good through the participation in, and the exercise of, civic duty' (p8). For example nearly half the public had been involved in fund-raising and a third had helped to organise activities. Though there has been a steady decline in membership of political parties, there has been a substantial increase in the numbers joining voluntary organisations including environmental groups like Friends of the Earth and Greenpeace; conservation bodies such as the National Trust; pressure groups; Neighbourhood Watch Schemes; women's groups; support for the statuary sectors e.g. the social services by Meals on Wheels, the education service through playgroup associations and school governorships; churches; the trade unions - the list could go on and on. These volunteers must have the skills required to perform their duties. Adult education is of course only a very marginal activity but we will now examine whether it can aid this active participation and help to counteract the forces that hinder participation.

Adult education

The traditional link between adult education and participatory democracy has been 'education for citizenship' and the equipping of individuals and/or groups to take a more active and effective part in running or changing society. This can be achieved through increased participation at different levels of society from local to national and in the kind of organisations, associations and groups outlined above. Writers such as Fieldhouse (1985,1988) have written extensively about the means by which adult education and particularly that provided by the universities can contribute to democracy. In this liberal and liberating tradition, it is the approach to the teaching and learning process that is crucial. Students can gain the weapons of critical awareness by acquiring a critical approach to authority and a capacity to distinguish matters of fact from those of opinion. Provided that this does not result in the student being so constrained by alternative views that they are reduced to sterile neutrality, then the skills learnt can be transformed through praxis - action based on theory - to more active and effective participation in society. However this pinpoints an unfortunate schism in adult education. Many writers and theorists assert that this collective form of adult education for emancipation and citizenship 'is regarded as less acceptable or valuable than either a blander education for individual personal self-fulfilment, or the new modes of continuing education intended to retrain and refit people for their economic function' (Fieldhouse 1985:44), whilst themselves showing the inverse preference. But it need not be an either/or; it could be a both/and. It may be that fundamental changes in society are unlikely to

be brought about by collective action alone and individual self-development can be seen as a means of reducing the inequalities that we have already shown decrease opportunities for participation. Individuals' perceptions of themselves and their false consciousness can be changed through individual development and perspective transformation. It is similarly a shame to denigrate work-related learning as not contributing to participation if for no other reason than that this is probably the most well-attended branch of adult education. The critical approach deemed so central to the liberal adult tradition described earlier can as valuably be applied to all forms of adult education no matter what the subject studied. We will return to this point later in this paper.

There is however a strong caveat to any discussion of adult education's contribution to a more active citizenry. The Commission on Citizenship found that structural inequality impedes participation and citizenship has to be learnt and for the young this learning takes place in the school. But here it is likely that the many children who are alienated from school by its reflection of middle-class, ethnocentric, gendered curriculum see citizenship like adult education as 'for other people'. Duke (1992) expresses links between education, learning and citizenship in the following rather depressing diagrams. The innocent and hopeful or perhaps gullible view of the link between education, learning and active citizenship is expresses as follows:-

E - L- active citizenship - impact on the society and state

The less innocent view illustrates the tenuous link between education and learning for many in our society and the institutionalisation of disadvantage. Crudely the top diagram represents the middle classes and the bottom the educational underachievers from other socio-economic and ethic groups.

L ------- active

----------impact on the society and state

E--------citizenship
and

E—
---------- disassociation from the state

L--------

The commitment of many adult educators to increased active participation in a democratic society is rather stymied when it becomes clear that those who participate in formal adult education are *already* from an active social minority whereas those do not participate in society are typically non-adult education joiners. There are no easy answers to this fundamental dilemma.

Whilst adult educators can encourage the enhancement of current students' contribution to society, they will not increase active participation in society in any substantive way if participation in provision is not extended. This may be possible through outreach and special targeted programmes. But if or when these groups are attracted into adult education, it is crucial not to repeat the pattern of alienation. As we argued earlier citizenship has to be learnt like any other skill but it will be learnt not through the formal curriculum but through positive experiences of participation . Participatory democracy is learnt through practice and therefore the adult education experience should itself be an experience of participatory democracy. In this way it can be an affective as well as cognitive learning experience that both citizenship and adult education are 'for us' and not just 'for other people'.

Mathematics

We shall now focus the discussion on the extent to which adults learning mathematics contributes to citizenship and active participation. But active participation in society was defined earlier as allowing those who wish to become actively involved, to understand and participate, to influence, persuade, campaign and whistleblow and be involved on decision-making. If the teaching and learning of mathematics contributes to this form of participation then it has a political focus. This leads to a discussion of the politics of mathematics education i.e. the political aims, whether conscious or unconscious, of those who design the mathematics curriculum, its role as conformist for social reproduction or radical for social change and the issues this raises for the teaching of adults.

Active citizenship involves numeracy

Above were listed a wide variety of activities of citizens who voluntarily participate in society. This included voluntary bodies, pressure groups and women's organisations. Examples of requirements of these bodies for the ability to produce or seek out data then analyse it together with the ability to understand the context where it was produced and used are:

- lead pollution levels in the area around local schools for a campaign against motorway development:
- for counter information to that underlying a local authority housing policy by a campaign for secure accommodation for single people:
- and for investigation of changes in women's employment patterns. to inform local authority adult education provision.

  Hence certain mathematical skills are needed for critical citizenship and include
- knowing about official information sources and how to access them;
- how to obtain information produced but not published;

- methods for the production of information at a small scale level in the community;
- and the interpretation of information from other sources or one's own research

(Evans 1990).

An important skill required in the struggle for critical citizenship is access to and a grasp of official statistics from which we obtain most of our information about government spending, unemployment, poverty etc. This access takes place mainly through the media (one has only to think of television news) but in the context of the current political, social and economic climate. These factors have an immense implication for the accuracy of information disseminated. Sadly one of the crucial factors in the debasement of political life is the shameless way statistics are now manipulated by politicians, lobbyists and special interest groups to provide supposedly objective evidence for an argument. A stinging indictment of the politicisation of official statistics was made by Murial Nisseel the founder editor of Social Trends in the official commemoration of the publication's silver jubilee. Manipulations include the mystification of trends through the publishing of claims without reference to the full details of assumptions etc. which are necessary to interpret them; frequent changing of crucial definitions e.g. unemployment; and ceasing to publish certain statistics e.g. the number living in poverty. To combat these machinations and help empower citizen groups, Evans (1992), using the analogy of barefoot doctors and lawyers or, more familiarly in Western societies, para-medics, identifies the need for not just a numerate citizenry but also a cadre of 'barefoot statisticians' or para-statisticians. These are not trained mathematicians or statisticians but individuals who can contribute to their own community groups their ability to handle the data requirements of the group and report the results of any searches or investigations in terms that are clear and comprehensible. Again the crucial role would be the production, accessing or presentation of data. An imaginative idea.

Thoresen (1992) identified school governors as a prime example of citizens who work responsibly and without pay on behalf of the community. Since the introduction of Local Management in Schools (LMS), governors in the state system have assumed financial responsibility for the running of their schools. She concludes that one of the stated aims of LMS, to increase local participation in the running of schools on the grounds of democracy and efficiency, may not be being achieved for reasons linked to mathematical ability and confidence. Some people are deterred from standing in the first place due to lack of knowledge or confidence in financial matters and even those that do and are elected may be making decisions on shaky ground due to similar

inadequacies. The numerical skills identified as being of most use to a governor were the ability to follow an argument that includes numbers especially large numbers; do a quick estimation; check other peoples calculation; and calculate accurately with speed and agility but using a calculator. This is a mismatch with numeracy practice encouraged at school and adults were insecure with mathematical skills half remembered from school or informally learnt as an adult or a confusion of the two. The result was that some non-specialist governors, including parents, did not take an active part in crucial debates or were being asked to rubber stamp financial decisions made by the financial subcommittee.

Another study into active citizenship investigated the numeracy issues raised by the introduction of the Council Tax (Hind 1993). It suggested that between ten and twenty percent of the adult population have problems with basic mathematics. She found that the resultant inability to interpret numerical information led to a lack of knowledge of new developments such as the Council Tax and an failure to understand its implementation. This meant that the citizen did not have the requisite information to make decisions about, for example, tax payments, the fairness or otherwise of the tax or how to claim for benefits or discounts. This affects the ability of the citizen to operate effectively in a democratic society. The other side of this coin is the responsibility of government to take mathematical limitations into account and provide information in an accurate but easily assimilated and accessible form.

Fostering critical awareness and democratic citizenship for adults through mathematics requires questioning and decision making, discussion, permitted conflict of opinion and views, challenging of authority, and negotiation. Hence the curriculum must include these components and materials should include socially relevant projects, authentic social statistics, accommodate social and cultural diversity and use local cultural resources (Ernest 1991). However the numeracy curriculum is at present constructed around the immediate personal or work related curriculum of the individual learner or based on the school mathematics curriculum. It could be extended, as has been done with literacy, to integrate numeracy skills with issues of public concern such as school budgets or new tax proposals. However adults expressed needs should not be ignored and any widening of the curriculum should not replace the instrumental goals and self-development requirements of the learner but enhance these. Adults can be encouraged to recognise and value the mathematics learning that takes place in all facets of their everyday life from individual to worker to citizen. The role of the adult as citizen, in addition to worker, can provide a wealth of suitable material for accessible everyday 'really useful knowledge'.

Can mathematical awareness contribute to political awareness?

There is no consensus between mathematics educators on this matter. Some argue that mathematics is antithetical to political awareness because it necessarily operates on the suppression of precisely those elements and functionings that need to be in sharp focus when thinking about the political (Pimm 1990). Using, as an example, any ballistic question in mathematics (a favourite topic at all levels), political thought would emphasis or stress ethics, values and morality or the results of success or failure of the strike and suppress the mathematics. Mathematical thought would of necessity emphasis the symbol manipulation and suppress the moral, philosophical or political questions. Examples and questions on percentages sometimes relate to unequal distribution of wage rises in small firms. Politically this raises issues of ideology. Mathematically, teachers and students alike suppress the meaning and concentrate on the symbol manipulation. Fluency is encouraged at the expense of social and political meaning because what matters is the skills and the resultant qualifications. What is ignored is the consequent depoliticisation of the student and teacher. Or, more cynically, may be not ignored but encouraged to form a more obedient compliant citizenry. A counter argument may be made that mathematical training may, by this very factor of 'de-meaning' situations, develop in the individual a free thinking, liberated from hegamonic thinking and hence free to challenge social injustice. Bertrand Russell is an example of such a politically aware mathematician. Writers from Plato on have seen a mathematical education as contributing actively to a political training by providing a rigorous background in rational thought, logical thinking, and problem-solving abilities. They see mathematics in itself and for its own sake engendering the educated person (Fauvel 1990). This in its turn is countered by arguments that the requirements for assessing a problem critically are epistemological, not logical, in character and hence academic mathematics gives no guarantee or cognitive basis for critical thinking (McPeck 1981). There may not be a real contradiction between these differing views when it is recognised that the one may be particularly apposite for mathematical learning for the masses with the other only applying to the elite in our society.

Politics and the mathematics curriculum

Mathematical problems centred around citizen issues such as school budgets, the Council Tax or unemployment figures can lead to accusations of a non-neutral curriculum that dispenses propaganda. This is a serious matter and the arguments as to whether or not there is a political dimension to mathematics education need to be examined carefully. Mathematics has the reputation of being the most value-free discipline. Some mathematics educators would argue that their job is simply

presenting the facts, teaching the skills and hence avoiding opinions and values. However if there is a political dimension to mathematics education, then by not identifying the opinions and values hidden in the data, these are then not open up to critical enquiry in the approach advocated earlier in the liberal tradition. Independent judgement is not developed and hence active and effective participation limited. Radical educators such as Freire (1985) strongly argue that no education is neutral and that non-controversial education is always political in as much as it implicitly supports the *status quo* and this is supported by Jenny Maxwell's research which exposed the 'hidden messages' in mathematical examples used in British schools (1991). She first lists some blatantly political examples of indoctrination from foreign cultures; guerrillas helping peasants in the fields from Mozambique; Freedom Fighters in Tanzania; agriculture and military applications from China. As outsiders, it is very easy for us to see the hegemonic forces at work in these examples but feel sure it does not happen here... She then made up a small collection of questions on percentages based on textbook questions. Questions included class-bias, gender-bias, and racism but in standard mathematical format. Of her sample of twenty-five teachers, just under a half commented on these biases and thought the questions 'very establishment'. The rest did not find them so or did not consider this relevant to their teaching of mathematics. After further discussions about a quarter of the teachers remained clearly of the opinion that mathematics education is and should be politically neutral. This despite the pervasive and unanimous attitude of guilt and apology whenever a teacher felt he or she was questioning the norms of society and four expressing fear of being thought leftist but none being anxious about upholding the values of the right. A small but illuminating example of false consciousness. Some of her cohort, however, moved through a perspective transformation and came to realise that 'you may end up putting forward social views that you disagree with'. The imbalance of questions in mathematics education generally is illustrated in the emphasis on mortgages, investment and interest rather than, say, social security payments. It would seem that the poor are being asked to struggle through the problems of the well-off but not visa-versa.

Some teachers of mathematics educators are trying to raise the awareness of their students to this political dimension and an interesting example of this comes from South Africa. Chris Breen, at the University of Cape Town, asks his students to comment on three views of school mathematics written from different political perspectives (1990). The technicist view addresses the applications of mathematics in a modern society; the esoteric view argues the beauty and elegance of higher mathematics but denigrates school mathematics; and the emancipatory view sees mathematics as a way of understanding and combating repression by the oppressors. This

practical example illustrate the strength of applying the ideas of a liberal education outlined earlier to a 'vocational' discipline. Breen's tentative results support the assertion that giving students access to arguments but then leaving them to make up their own minds, enables them to learn to challenge existing prejudices, both their own and others', and so develop an independent judgement.

Political influences on the design of the mathematics curriculum

To unpack the issue of the existence or otherwise of a political dimension to mathematics education, it is helpful to examine the aims of the mathematics curriculum within the context of the range of interest groups at work in educational policy in Britain today. We shall take as our starting point Paul Ernest's analysis of mathematics education in the school curriculum (1992) which builds on the early work of Raymond Williams on education (1961) and then extend this to adult education. Ernest identifies five interest groups in education. The industrial trainers whose aims in education are utilitarian and concerned with training a workforce in basic skills. The technical pragmatists are also concerned with the pragmatic skills for a well trained workforce but extend their concept of education beyond the 'back-to-basics' of the industrial trainers to information technology capabilities and skills together with communication and problem solving skills. The old humanists are interested in the transmission of cultural heritage and knowledge for its own sake. In mathematics education, they are interested in pure mathematics for its beauty and elegance not its utilitarian worth. The progressive educators grew out of the progressive tradition and believe in education for individual self-development. In mathematics education, this manifests itself in a belief in student-centred learning through problem-solving in a supportive environment. The public educators are radicals concerned with democracy and social justice. They see education as the means of extending participation in all aspects of a democratic society. In mathematics education, this group sees the subject as emancipatory, giving students 'the confidence to pose problems, initiate investigations and autonomous projects, to critically examine and question the use of mathematics and statistics in our increasingly mathematised society, combating the mathematical mystification prevalent in the treatment of social and political issues. The outcome should be individuals who are more able to take control of their lives, more able to fully participate in the economic life and democratic decision-making in modern society and, ultimately, able to facilitate social change to a more just society'(Ernest 1992:36).

In the development of the National Curriculum, Ernest argues that the public educators and the progressive educators have had little or no

impact, whilst the industrial trainers have dominated the successful alliance between the other three groups. The implications of this on the school curriculum are immense and have resulted in a utilitarian, as assessment-driven curriculum based on objectives and competences. It can be argued that the National Curriculum is about testing and grading per se and what is tested is of less than secondary importance (Noss 1992).If this is so then this lack of concern for content indicates the government's view of education i.e. that it is more a socialising process than a training one. It also means a curriculum dedicated to the preservation of the *status quo*.. The return to an uncritical dependency on the teacher for the 'right' answer is intended to lead to the development of an uncritical reliance on authority in society in general and hence a passive citizenry (Lerman 1992). This analyse is firmly places mathematics education in the political arena.

Mathematics in its political and social context

All of this has direct implication to adults learning mathematics. Many adults study mathematics to obtain a qualification directly linked to the National Curriculum. Others are interested in National Vocational Qualifications which come from the same stable. The dominant approach to adult education and adults' mathematics education over recent years has been the student-centred, group orientated, problem solving, progressive educator approach which views human beings and their growth and development as central. This perspective is very individualistic and does not locate the individual in a political, social and economic matrix nor does it recognise the effect of this matrix on society and the education that society provides. (This emphasis on individual development rather than social change was confirmed in the results of the author's recent national study of targeting in Access to Higher Education provision (Benn and Burton 1995). The process of learning and the development of the individual is seen as equally, if not more, critical than the knowledge itself. Although this approach to teaching and learning is different from that of the industrial trainers and technical pragmatists, all three groups share the common perspective that mathematical knowledge is certain, neutral and value-free. This would seem to imply that adult educators, with this humanist, progressive approach based on the ideas of Dewey and Rogers, may well feel comfortable, or at least not too uncomfortable, continuing to teach in their existing student-centred way but towards the new goal of competency-driven education. The popular learning technology of Knowles (see for example 1980,1984) with its language of experiential, student-centred learning through negotiated contracts is easily adapted to a curriculum based on work and everyday mathematical skills for individuals through competency-based assessment. So current adult education practice may have adapted, or be adapting, without too much difficulty to the hegamonic approach of the dominant industrial trainers.

But this paper is examining the contribution of adults learning mathematics to active citizenship and this alliance of the industrial trainer and progressives by concentrating on mathematics as a set of skills which when acquired will improve career or job prospects or increase personal development and feelings of self-worth, may not contribute to the active participation we have been discussing. The reason for this is located in the common belief of the two approaches that mathematics is absolute, neutral and value-free which leads to an education which ignores the relationship between mathematics and the world it inhabits and is blind to the ideological dimension of the knowledge it transmits. This, public educators assert, cannot lead to active and critical citizenship. If this is our goal, we must look elsewhere. To investigate the relationship between education and active and critical participation in the democratic process, it is interesting to examine the ideas expressed in Freire's 'Pedagogy of the Oppressed' (1985) which though written as a reflection on his literacy work with the oppressed people of Brazil, can also be seen as relevant to numeracy in our own culture. Freire termed the technical educator's approach to education as 'banking', the depositing of information by the knowledgeable 'teachers or 'authority' into the 'empty vessels' of the passive students. The students only action is to receive, file and store the deposits. They are cut off from creativity and enquiry and hence knowledge and action. His alternative to education for oppression is education for liberation through praxis, 'the action and reflection of men (*sic*) upon their world in order to transform it'. This occurs through conscientization, the process through which people become aware of how their experiences are structured and conditioned, of the forces acting upon them through the social, political and economic culture in which they live, and of the different interest groups in society whose needs are being met or not met by these forces. In mathematics education, conscientization is the process where students become aware of the relationship between mathematics and society and how this is related to their own condition, situation and development. These ideas, though not usually applied to mathematics education, may contain the basis for mathematics for active citizenship in the British context.

Most views presented to students, as we illustrated with Jenny Maxwell's hidden messages, legitimate the existing social order. This excludes ideas of change, experience of conflict and the creation by the student their own set of values. Education for active involvement needs to counteract the hegemony by presenting other competing world views. Through critical analysis and reflection, the student can be encouraged to recognise and evaluate different paradigms and through discussion of controversial issues, the student can be encouraged to develop frameworks, concepts and approaches. This transfers knowledge and hence power, which with the banking concept is held with the elite, into the hands of the people. In

this process, mathematics is not seen as valuable in itself but as a tool, a library of information and skills, to be called on as needed when and only when the problem requires it. Critical thinking is crucial and can be developed through problem posing and problem generation. There are several stages to this approach. First identification, the locating oneself within a culture. The learner needs to understand the cultural constraints operating within society but also, importantly, on themselves. They can locate themselves in this framework of forces by a growing realisation of the effects of for example sexism, racism and class conflict on their individual experiences of learning mathematics and the larger context in which these experiences take place. Through this raised awareness, the learner can come to a better understanding of the causes of the prevalence of mathematical anxiety and their own, perhaps troubled, relationship with mathematics. Next the learner must become genuinely engage in some form of mathematics. This can take place through the collective generation of problems of interest and hence motivation to the learner. This collective approach can take place in the formal learning situation through dialogue and group work. Then comes the objectification of the problem i.e. the standing back from problem and critical reflecting upon the purposes and consequences of studying this problem in relation to wider values. For example the group may choose to study armament spending. To ensure a critical approach, all data sources are named and data from rival sources is provided. Differences are analysed in terms of, for example, differing interests groups. Critical judgements can be made on the reliability of data and conclusions drawn about the use of data in this controversial issue. This approach generates an awareness of the social and political responsibility of mathematics and locates mathematics in its social and political context. Here statistical data is not used as a vehicle for learning mathematical techniques rather the data and questioning this data is used to understand and change assumptions about issues. This is the start of a critical mathematics curriculum where a critical understanding of numerical data prompts us to question unchallenged assumptions about how society is structured and enables us to act from a more informed position on societal structures and process (Frankenstein 1990; Abraham and Bibby 1992). As an emancipatory process it is very powerful in raising awareness that mathematics belongs to everyone; that the learner and teacher are engaged *together* in the learning and doing of mathematics and the world at large is accessible to analysis, criticism and transformation (Lerman 1992). These attributes contribute usefully to the requirements for active participation and critical citizenship.

Problems arising from this approach

The approaches to mathematics education outlined in the last paragraph would arguably lead to a more discriminating critical citizenry with an increased capacity to take an active part in society if they so wish but there

are caveats. Abraham and Bibby (1992) give an example of a mathematics question set in 1986 which looked at growths and comparisons in military spending and asked for military spending per head of population and comments on the results. They list the reactions from the more conservative British press which complained amongst other things of propaganda in the classroom. As a result of these complaints, it was decided that examination boards should in future vet mathematical papers for political content. Political here clearly means anti-hegomonic. Any introduction of curriculum that critically debate the relationship between mathematics and society can expect this kind of response from those groups whose interests are being served by the present system. But adult education is a more marginal activity with considerably greater freedom of action, or at least was until the 1992 Education acts tightened the purse strings, located much provision under the auspices of the FEFC and linked funding primarily to qualifications. In an assessed course, the prescription of the syllabus almost inevitably limit freedom of content.

Even if brave mathematics adult educators risks bringing the wrath of the establishment down on their head and do change their approach, little work has been done on establishing whether a critical approach is a transferable skill or indeed whether indeed the learners would even wish to transfer it. Increased critical awareness is not always comfortable and may be contained in a compartment of the learner's life. If the learner does use these skills in a wider critique of society, this may lead to frustration and anger when confronted by forces beyond their power to change. This is not to argue against this more emancipatory form of education, far from it, but educators need to be aware of these potential outcomes. A realistic assessment of the outcomes of any change of teaching are that individuals might be more frustrated in their new state of consciousness but they may also be more empowered to join attempts to change to a more just society. The net result in our consensual society will not be revolution but might lead to a slight shift in the political climate towards a more democratic and participatory society.

This paper has attempted to explore the complex web of factors linking citizenship and adults learning mathematics. There are no easy answers but the questions are worth asking for the sake of active participation, democracy and a more just society.

Note: This is an early version of a chapter in *Adults Count Too* to be published by NIACE in 1996.

References

Abraham,J. and Bibby,N. (1990) 'Mathematics and Society: Ethnomathematics and the Public Educator Curriculum' in M.Nickson and S.Lerman (eds) (1990) pp180-201

Benn,R. and Burton,R.'Access and Targeting: an Exploration of a Contradiction', International Journal of Lifelong Education, vol 14(6).

Breen,C. (1990) 'Reflecting on Energy Activities: an Attempt at Liberating Pre-service Mathematics Teachers at a South African University' in R.Noss *et al* (1990) pp36-45

Commission on Citizenship (1990) Encouraging Citizenship London: HMSO.

Duke,C. (1992) 'Learning Citizenship' Adults Learning vol 4(2) pp49-52.

Ernest,P. (1990) 'Aims in Mathematics Education as an Expression of Ideology' in R.Noss *et al* (1990) pp85-92

Ernest,P. (1992) 'The National Curriculum in mathematics: its aims and philosophy' in Nickson,M. and Lerman,S. (eds) (1992) pp33-61. Evans,J. (1990) 'Mathematics Learning and the Discourse of Critical Citizenship' in R.Noss *et al* (1990) pp93-95

Evans,J. (1992) 'Mathematics for Adults: Community Research and Barefoot Statisticians' in M.Nickson and S.Lerman (eds) (1990) pp202-216

Fauvel,J. (1990) 'Mathematics and empowerment: historical perspectives' in R.Noss *et al*(1990) pp104-105.

Fieldhouse R. (1985) 'The problems of objectivity, social purpose and ideological commitment in university adult education' in Taylor,R.,Rockhill,K. and Fieldhouse,R.(1985).

Fieldhouse R. and Taylor R. (1988) 'Ideology and political socialisation in the United Kingdom' in Fieldhouse R. The Political Education of the Servants of the State, Manchester: MUP.

Frankenstein,M. (1990) 'Critical mathematics literacy' in R.Noss *et al* (1990) pp 106-114.

Freire, P. 1985 Pedagogy of the Oppressed, Harmondsworth: Pelican.

Harris,D. quoted in Whelton,M. (1991) 'The life and times of adult education in North American liberal democracy' International Journal of University Adult Education vol (30)1 pp 13-38.

Knowles, M.S. (1980) (2nd Ed) The Modern Practice of Adult Education: From Pedagogy to Andragogy Chicago: Association Press.

Knowles,M.S. (1984) The Adult Learner: a Neglected Species Chicago: Follet.

Lerman,S. (1992) 'Learning Mathematics as a Revolutionary Activity' in M.Nickson and S.Lerman (eds) (1990) pp170-179

Maxwell,J. (1991) 'Hidden Messages' in Harris,M. (ed) Schools, Mathematics and Work Bassingstoke: Falmer Press. pp 67-70.

McPeck,J. (1981) quoted in Abraham,J. and Bibby,N. (1992)

Nickson,M. and Lerman,S. (eds) (1990) The Social Context of Mathematics Education Southbank Press:London.

Noss,R. (1990) 'The National Curriculum and mathematics: political perspectives and implications' in M.Nickson and S.Lerman (eds) (1990) pp62-64.

Noss,R.*et al* (1990) Political Dimensions of Mathematics Education: Action and Critique Department of Mathematics, Statistics and Computing, Institute of Education, University of London:London.

Pimm,D.(1990) 'Mathematical versus Political Awareness' in R.Noss *et al* (1990) pp200-204

Roche,M. (1992) Rethinking Citizenship, Polity Press.

Taylor,R.,Rockhill,K. and Fieldhouse,R. (1985) University Adult Education in England and the USA Beckenham: Croom Helm

Thorstad,I. (1992) 'Adult Numeracy and Responsible Citizenship' Adults Learning vol (4) 4 pp104-105.

Williams,R. (1961) The Long Revolution Harmondsworth: Penguin.

Williams,R. (1976) Keywords

ADULT EDUCATION AND NEW PARADIGM RESEARCH

Allen Parrott

Introduction

The history of adult education is full of innovation. Adult educators were at least a generation ahead of mainstream colleagues in embracing discovery methods and student-centred techniques, for example. Subjects like sociology, Cultural Studies and Local History were pioneered and developed with adult learners long before they entered undergraduate or school curricula. But the same pioneering spirit is less evident in the area of academic research. It is slightly surprising to find that most adult education research - that is, research by adult educators and about adult education - remains wedded to an outdated positivism, and to methodologies which have had their serious limitations well established for at least 20 years.

In the brief description of new paradigm research which follows I want to suggest that adult education would be an especially fertile ground for the new style inquiry methods and philosophy because they accord so completely with adult education values. In particular, the way that adult educators have traditionally argued that adult learners should be treated - as self-directed, as whole persons and as repositories of valuable life experience - is precisely the same approach that new paradigm inquirers have taken when considering the nature of properly 'human inquiry' (Reason & Rowan,1981; Reason,1988).

Old and New Paradigms

The orthodox and still-dominant scientific paradigm takes detachment and objectivity as its starting points, and has measurability and predictability as its aims. Its 'purest' research model or method is the controlled experiment, preferably in a laboratory, where all variables can be known and controlled. The social sciences have developed methodologies which are inevitably less 'pure' but which still aspire to get as close as possible to the same objectivist criteria.

Despite the obvious dominance of this old-fashioned objectivist worldview in British education during the 1990's, with all the emphasis on measuring learners' competences rather than developing them as persons, there can be no doubt that at the deeper cultural level such a positivist approach to science and to knowledge is losing its hold on the way we think about the

world, and on the ways in which we act and relate towards it. Since the start of the 20th century, when Einstein demonstrated that all was not what it seemed in the physical universe, each field of study or academic discipline has followed physics in asking fundamental questions about the nature of its particular branch of knowledge. In every case the conclusion seems to be some variation on two related themes: firstly, that there is no single and irrefutable Truth 'out there' waiting to be discovered by detached, objective scientists; secondly, that the knower (you and me) can never be separated entirely from what is known.

For a long time the relativism, to which these insights inevitably led, was feared - for understandable reasons. How can we stay grounded in a real, material world and how can we live our lives according to some set of key values, if all our knowledge and all our beliefs are relative and liable to be overturned? How do we distinguish between sanity and madness, for example? But many modern thinkers - social scientists as well as academic philosophers - have been developing a rational position that goes beyond both objectivism and relativism and that avoids treating them as either-or polarities. They have been articulating a new paradigm - or world view - which encourages people to commit themselves wholeheartedly to their beliefs, meanings and values while simultaneously recognising the dangers of holding them too tightly. In human affairs nothing can be assumed to have permanence or universality, but the sign of an advanced civilisation is that people in it will both accept this premise and yet have deep, unflinchingly held convictions. Now that fundamentalism has become perhaps the biggest political danger in the modern world such a post-positivist perspective on truth and reality seems increasingly necessary.

While it is easy to identify the political, religious and tribal fundamentalism of others, it is harder to acknowledge that our own objectivist world view is itself a form of fundamentalism and wrong-headedness. From a social science perspective the main critique of the objectivist paradigm is that it leads to methods which are neither adequate nor appropriate for the study of persons. New paradigm inquirers take issue with six fundamental premises which underlie traditional research methodology:

1. There is one reality.

2. This reality can be objectively known.

3. The aim of inquiry or research is to discover something fundamental (elements or processes) about this reality.

4. Such knowledge stays the same for all knowers.

5. Such knowledge can be validated empirically by testing propositions in a controlled situation.

6. Wholes can be adequately explained in terms of the sum of their parts and also in terms of linear cause and effect processes.

Proponents of the alternative worldview find these propositions too limiting and simply not in accord with their own felt reality as individuals, nor with their experience of living and working with others in families, groups, organisations and society. Their premises therefore are radically different.

1. Reality is both one and many. Whatever objective reality (or realities) may exist will always remain beyond our knowing - in any complete or certain way - because of the limitations of our perceptual apparatus. We only know what our current levels, or thresholds, of perception and perspective permit us to know. There are many possible - and valid - perspectives on the same reality.

2. We are always and inevitably involved in the knowledge we construct, even if we are ostensibly absorbing or acquiring it from others (eg as babies). We are therefore constructors - or co-creators - of our own reality - to some degree, actually, and almost always to a greater degree potentially. (This is one definition of 'self-determining' or 'self-directed', and therefore, I believe, of special relevance to adult educators.)

3. Despite our extensive conditioning into the 'yoga of objectivity' (Skolimowski,1994), whereby our brains have been trained and exercised over many years to think in the limited and positivist mode, we all have experience of many kinds of knowing. Just as we each possess multiple intelligences so we also have multiple ways of sensing, experiencing and 'knowing' the world.

4. The most that any inquiry into human beings and their behaviour can hope for is deeper understanding or 'verstehen'. In social science research therefore any quest for fundamental truth, let alone absolute proof, is misguided.

5. A genuinely human form of inquiry is as likely to raise questions as to provide answers. But the questions will be geared toward action in the world - high quality action (which includes useful mapping and theorising), rather than high quality answers to technical or academic questions of doubtful importance.

6. Our constructed and multiple realities can only be effectively studied, or researched, in a holistic fashion. Any research process must acknowledge people's different perspectives and their self-determining nature. Human behaviour in general, and individual life stories in particular, cannot be fully explained using linear cause and effect models: more sophisticated tools must become a normal part of research methodology.

There is much more to new paradigm research theory than it is possible to cover in a brief paper, so I shall limit myself to a few more observations of a general nature. Some of the most incisive criticism of traditional positivist science has come from feminist writers (e.g.Harding,1987), pointing out how our current intellectual orthodoxy is crudely masculine and arrogant in, for example, its treatment of nature. There has been an assumption that science is about achievement, problem-solving, power and control - forcing nature to yield its secrets. But the greatest of male scientists - one thinks of Newton and his pebbles on the sea-shore, or Whitehead who thanked Bertrand Russell after listening to Russell's definitive lecture on the new quantum physics for 'leaving unobscured ... the vast darkness of the subject' - have explicitly acknowledged how little we know or will ever know in the positivist sense of the word. We need to lose an epistemological arrogance, which has been described as immature and male, and 'to learn to think in a new way' as Gregory Bateson told us 25 years ago (Bateson,1973).

In practice a number of research methodologies have been developed under the new paradigm banner. They all tend towards a highly participatory form of action research. Such research frequently takes place in work environments, and the broad aim is to help the organisation develop their own ongoing culture of inquiry - to make participative research a part of normal work life. This kind of initiative foreshadows, perhaps, a vision which has also been much discussed over recent years by forward-looking adult educators - the utopian vision of a Learning Society as the successor to Industrial Society.

It is an integral part of these new paradigm methodologies to place core human values at the centre of the research process. For example, the 'subjects' of any inquiry are never regarded simply as sources of data: they are fellow human beings, complex and self-determining learners just like the researchers or inquirers themselves. (It is a curious aspect of orthodox inquiry that it assumes self-determination on the part of the researcher, indeed insists upon it in many cases judging by the low level of supervision reported by some postgraduates, while nearly always denying it to the 'subjects' whose behaviour is being studied.)

In the new paradigm research becomes a living learning process. Through collaborative approaches the 'subjects' are turned into co-researchers. They not only participate in the activity being investigated but are also invited to contribute to all the thinking which goes on during a typical research project - initial ideas, hypotheses, methods, conclusions etc. Instead of research on people this becomes research with people. Everyone concerned is likely to be affected by the process and to learn from it. The sense of shared ownership can become very strong, even though the final 'product' or the thesis usually remains the responsibility of the initiating researcher(s).

Such research is not easy. The whole business becomes much more transparent than traditional research. A level of personal expertise is needed that goes beyond the normal intellectual requirements for academic research - expertise in working with people and in handling anxiety and distress, theirs or one's own. A high level of self-awareness is also essential. Research of this kind needs skilled and very supportive supervision, if only to help explain to the researcher's sceptical colleagues or bosses that these new approaches are indeed academically respectable. Yet these are challenges and difficulties which should certainly not frighten away adult educators. The other side of the same coin is research that is more personally satisfying, because it engages with people in a more fully human way, and probably more intellectually rewarding as well.

I want to finish with a discussion of the biggest problem faced by new paradigm researchers in establishing credibility for their philosophy and methods: the issue of validity.

The detachment and objectivity which lie at the core of orthodox inquiry have been its strengths as well as its weakness. They may lead to reductionist approaches, but they have also provided clear criteria for validity and for demonstrable academic rigour in any individual piece of work. This general point is not weakened by the countless examples of fudging, sometimes even of falsifying, which goes on in mainstream research: if it is considered important enough, there are well-established ways to check such findings and to uncover any deception. Such objective checking of results is essential, precisely because orthodox science makes such strong claims to be discovering truth and proof.

In new paradigm research there is seldom any possibility of repeating a given piece of research without introducing key new variables, and these include the personality and beliefs of the researcher. 'Data' and 'evidence' are much more likely to be qualitative than quantitative. Independent criteria for establishing the reliability and/or validity of any research findings will be difficult to establish, especially as the co-researchers

('subjects') are themselves likely to have been changed by the actions and reflections which comprise the research process.

So how can the world be persuaded to accept such inquiries, especially an academic world which is likely to have a strong vested interest in maintaining the objectivist status quo? Can it ever be accepted that new paradigm inquiries have indeed been rigorously conducted or that their findings are valid?

These questions can in some degree be evaded rather than answered directly, simply because new paradigm research makes no claims for truth or proof. The force of the questions derives from the unexamined assumptions lying behind the yoga of objectivity mentioned earlier: the indoctrination which implicitly requires all research into human beings to ape mechanistic scientific research with its strict controls. But such a response is inadequate on its own, being only a theoretical justification for new kinds of research. In practice there are many problems facing the new paradigm researcher around the issues of deception and collusion, both of which can be unconscious as well as conscious. These problems have to be explicitly faced by each researcher in every new paradigm inquiry, in order to establish their and its integrity.

The threats of deception and collusion can be minimised, though never completely eradicated. New paradigm researchers have developed techniques and criteria for establishing rigour and validity that are more in tune with a fully human approach to inquiry. But as human beings themselves they cannot provide any cast-iron guarantees about the effect of their own assumptions and behaviours on the research process and findings: simply to discuss these things, however, seems to me a major step forward, and in the new paradigm inquiries the issue of validity is dealt with from the outset.

Researchers are expected to be explicitly self-aware about their own motives and biases and to let co-researchers and colleagues know their perspectives from the start. Throughout any inquiry all its processes are open to inspection and are eventually written up in a way that will allow readers to make their own judgements about its authenticity. Self-disclosure often goes hand-in-hand with self-awareness. It is recognised that some of the 'new age' (as opposed to 'new paradigm') thinking is sham as well as shallow, that in an age of fundamentalism people can be easily conned because they are searching, often desperately, for an alternative to the objectivism and materialism of western culture, and that authenticity and integrity are therefore of paramount importance.

Demonstrating validity and reliability in the new paradigm will always be a contextual affair, something intrinsic to the entire inquiry process. It cannot be derived solely from an extrinsic examination of the research's results or conclusions. Thus the way the research subjects are treated, the way evidence and data are dealt with, the way theoretical perspectives are arrived at and the way findings are presented are all possible areas where research might be judged valid or invalid. In these ways therefore the new paradigm actually demands much more rigour than the old, because the researcher has to work harder and to open themselves to inspection in recording every aspect and each stage of the research. Problems encountered must be documented, including false starts, emotional blocks, poor thinking and all the various personal frustrations which for most of us are a part of the total experience of doing academic research.

Honesty and openness are not enough in themselves. There must also be a critical self-awareness or what Reason defines as 'critical subjectivity'. Any researcher is expected to be aware of other perspectives, besides their own, and to be able to criticise their own from another perspective. One technique found useful by new paradigm inquirers is to invite friends 'to act as enemies', or to play devil's advocate. Findings or work in progress may be discussed and challenged from radically different points of view, including orthodox positivism. In this way researchers are helped to see, and to express with clarity, not just where they are coming from but also where they may have arrived. Another important technique is repetition, or 'research cycling', where a cycle of action and reflection is repeated a number of times. This may be with the same co-researchers, or with different practitioners in the same field, but the effect is to deepen understanding.

If the researcher has to work harder in new paradigm inquiry so too does the reader. In the end it is those same humanistic values which underlie good adult education practice - love, respect for others, integrity, democracy - which readers of new paradigm research also have to look for to establish in their own minds any piece of research's validity and reliability. The reader's own experience becomes relevant to their assessment of the work, and their willingness to put aside, if only temporarily, their objectivist training. For many readers intuition, or the ability to sense truthfulness (or its opposite) by reading between the lines, may also play some part in the process of assessing its validity, although probably not to the exclusion of more familiar and grounded intellectual judgements.

All this is both more difficult and more rewarding than I may have made it sound. Managing new paradigm research is a complex and multi-faceted process. It frequently involves difficult questions about group or individual behaviour. In fact it is very like adult teaching. Coping with such

difficulties is the necessary price for avoiding psychological reductionism and, dare I say it, the sheer boredom of so much orthodox research.

Conclusion

Different kinds of question lend themselves to different kinds of research. There will always be a need for the kind of objectivist methodology that sets out to answer with as much certainty as possible some question that can be framed in an either/or fashion. Medical research provides many examples: Is this drug safe? Should babies lie on their backs or their fronts?

My suggestion however is that nearly all adult education research is not of this kind. It is about more complex issues of power and politics, personal relationships and personal development (as indeed is a lot of health-related research as well). We should stop allowing ourselves to be intimidated by a scientific positivism which has increasingly shaky epistemological and moral foundations. The new paradigm research methodologies may appear unsettling as well as unfamiliar but they are worth exploring by adult educators because in these new methods there is much that is in tune with their own best practices.

REFERENCES

Bateson.G (1973) Steps to an Ecology of Mind (Granada)

Harding.S (ed) (1987) Feminism and Methodology (Open University Press)

Reason.P (1988) Human Inquiry in Action (Wiley)

Reason.P & Rawan.J (eds) (1981) Human Inquiry: A Sourcebook of New Paradigm Research (Wiley)

Skolimowski.H (1994) The Participatory Mind (Arkana/Penguin)